

1.1 Assignment Change Request – Validation

1.1.1 General Form Entry Validation

1. If Data on the form is not changed at the form submission time, the following error message is displayed: “Invalid Request submission: No Data changed.”

Note: Background/Justification or Supporting Files do not represent the data of the request, so if user only entered the Background/Justification or Uploaded file (or both), that should result in the same error message.
2. If Dual Council and/or Dual IC(s) changed only, and the user is not DRR Chief, the following error message is displayed: “You can not submit Request with Dual Council Date or Dual IC(s) only change”.

1.1.2 General Form Entry Confirmation

The Confirmation page must be presented upon submission of the request or any subsequent Data Changes to the request. All fields will be shown in read-only format with changed fields highlighted in bold. The Background/Justification field will remain Editable on the Confirmation Screen. For detailed look and feel see UI prototype.

Additionally, Find PI of the grant number if grant number is changed (the new one typed in) and show that PI to the User at the Confirmation time.

1.1.3 Grant Number Validation

Below table lists the conditions and errors that shall result from validating the Grant Number entry based on field validation (not other rules, these are covered in the following section – Other Grant Number Validation).

1.1.3.1 Field Validation of Grant Number

Field Name	Condition	Error/Warning
Type	Application Type Code is not one of the following: 1, 2, 3, 4, 8, 9	You have entered invalid Application Type. Valid Values are 1, 2, 3, 4, 8, and 9.
	Application Type must be entered	You must enter Application Type.
Activity Code	Activity code value must be one of the Activity Codes designated as DRR_USED_CODE = Y.	Activity Code is invalid. Please use the List of Values to select a valid Activity Code.
	Activity Code must be entered	You must enter Activity Code
IC	ICs must be one of the ICs where Used BY DRR code is Yes and it must not be RG.	Admin IC is invalid. Please use the List of Values to select a valid Admin IC.
	IC Must be entered	You must enter IC
	If IC is changed then automatically blank out Serial Number field	No errors or warnings
Support Year	Must be positive Number from 1 to 99	Invalid Support Year.
	Support Year must be entered if	You must enter Support Year

	Serial Number is entered.	
Suffix Code	Suffix code is not one of the following: A1, A2, A3, S1, S2, S3, A1S1, A1S2, A1S3, A2S1, A2S2, A2S3, A3S1, A3S2, A3S3, S1A1, S1A2, S1A3, S2A1, S2A2, S2A3, S3A1, S3A2, S3A3	Invalid Suffix Code.
Serial Num	If serial number is blank then display xxxxxx on the confirmation page and on the Read-Only Change Request form throughout the life of the Request.	None.

1.1.3.2 Other Grant Number Validation

Below table describes the rules for the Grant Number validation when Actor is changing one or more of the Grant Number fields.

Note: Warning allows user to proceed with the submission, but verifies if that is what in fact user wants to do. Error stops the processing and does not allow User to proceed with submission of the Request.

Error or Warning Number corresponds to the Errors and Warnings Text table in Appendix A of this document.

General Rule for Grant Number validation

If Activity Field is the only field that is changing on the grant number, then it is ok to skip the below validation rules and proceed with processing.

#	Condition that causes Error/Warning	Error/Warning Text
1	The entered new grant number is for existing grant number on another application	Error: 30007
2	If application type code is 1 AND (Activity Code is Blank OR Admin IC code is Blank OR Serial Number is Blank OR Support Year is Blank)	You must enter more than just the Type Code of the Grant. Activity and IC fields must be entered.
3	If Type Code is 8 and Activity Code is changed	Error: 30196
4	If Type Code is 8 and IC is the same as before	Error: 30197
5	If Type Code is 8 and grant is not awarded	Error: 30198
6	If Type Code is 4 and Activity Code is not R37	Error: 30015
7	If Type Code is changed from Type 9 to Type 1	Error: 30128
8	If Type Code is 9 and Support Year is changed	Error: 30002

9	Combination of IC and Activity Code must be valid	Error: 30001
10	If Type Code is 2, 4, or 9 AND Supp Year is 1 OR If Type Code is 1 and Supp Year is not 1	Error: 30002
11	Type code is 1, 2, or 9 and Suffix code is NOT A1, A2, or A3	Error: 30003
12	Type code is 1, 2, 3, or 9 AND (first two characters of the Suffix Code is A3 OR 3 rd and 4 th characters of the Suffix Code is A3)	Warning: 10214
13	If Type code is 3 AND Suffix Code is NOT one of these: A1, A2, A3, S1, S2, S3, A1S1, A1S2, A1S3, A2S1, A2S2, A2S3, A3S1, A3S2, A3S3, S1A1, S1A2, S1A3, S2A1, S2A2, S2A3, S3A1, S3A2, S3A3	Error: 30003
14	If Type code is 3 AND Suffix Code is blank	Error: 00118
15	If Type code is 4 AND Suffix Code is not blank	Error: 00116
16	If Type Code is 2 or 4 AND there is existing Type 5 grant Note: When checking for existing grants, the Activity Codes that start with R, U, or P are treated as the same Activity Code. Example: 5R01CA12345-01 and 5U01CA12345-01 are the same	Error: 10230
17	If changing Activity Code and the new Activity Code starts with R, P or U and the old Activity Code was R, P, or U, then .. If old Activity Code was R41, R42, R43, R44, U43, or U44 AND new Activity Code is NOT R41, R42, R43, R44, U43, or U44 - OR - Old Activity Code was NOT R41, R42, R43, R44, U43, or U44 AND new Activity Code IS R41, R42, R43, R44, U43, or U44	Error: 30005
18	If NEW Activity Code starts with T and OLD Activity Code was R41, R42, R43, R44, U43, or U44 - OR - If OLD Activity Code starts with T and NEW Activity code is R41, R42, R43, R44, U43, or U44	Error: 30005

	<p>- OR –</p> <p>If OLD Activity Code starts with F and new Activity Code does not start with F</p> <p>- OR -</p> <p>If NEW Activity Code starts with F and OLD Activity code does not start with F</p>	
19	If Type is 1 AND Suffix Code is blank AND Serial Number is entered then check that the Serial Number is NOT (greater or equal) to the existing IC/Serial Number combination within the IC log of Serial Numbers.	Error: 30151
20	If Type 1 AND Serial Number is entered AND (IC or Activity or Support year is not entered)	Error: 30012
21	<p>If Type 1 and Suffix Code is entered AND (Activity or IC or Support Year not entered) then error.</p> <p><i>Note: Existing code is not checking if Serial Number is entered for this rule.</i></p>	Error: 30009
22	If Type 1 and the only element that is changing on the grant is Suffix Code then run the Previous Grant Check (see Previous Grant Check Algorithm).	<p>If Previous Grant Check Algorithm returned E</p> <p>Error: 00105</p> <p>If Previous Grant Check Algorithm returned N</p> <p>Error: 00267</p> <p>If Previous Grant Check Algorithm returned Y</p> <p>Passed validation – no errors.</p>
23	<p>If Type 1 or Type 2 or Type 9 and the only element that is changing on the grant is Suffix Code And Previous Grant Check Algorithm passed and Previous Grant Suffix Code is not blank and support year of the Previous Grant and New Grant are the same then</p> <p>If 2nd character of the Suffix Code NOT equals to 2nd character of the Previous Grants' Suffix Code + 1] then warning.</p> <p><i>Note: There is no code that checks that if prior grant's Suffix Code is blank, then 2nd character of the new suffix code must be 1.</i></p>	Warning: 10223
24	Type 2 or 4 and Activity or IC or Serial Number or Support Year are not entered	30009
25	Type 2 or 3 or 4 – Check Prior Grant	<p>If Previous Grant Check Algorithm returned E</p> <p>Error: 00105</p>

	<i>Note: there are additional rules to this for Type 3 and 4</i>	<p>If Previous Grant Check Algorithm returned N</p> <p>Error: 00267</p> <p>If Previous Grant Check Algorithm returned Y</p> <p>Passed validation – no errors.</p>
26	Type 2 and Prior Grant's (see Get Prior Grant Algorithm) support year + Prior Grant's Out Years Number + 1 not equals to Support Year entered	Warning: 10225
27	<p>Type 2 or 3 or 4 – There must be awarded prior grant</p> <p>Check that within the list of Prior Grants (see Get Prior Grant Algorithm) at least one is awarded (status of the application is awarded).</p> <p>If not, then warning.</p>	<p>Warning: 10229 (for Type 2 and 4)</p> <p>Warning: 10227 (for Type 3)</p>
28	Type 3 and Activity or IC or Serial Number or Support Year or Suffix Code are not entered	Error: 30011
29	<p>Type 3- No stand alone amendment record for supplements.</p> <p>If 1st character of the Suffix is A and 3rd character is blank</p>	Error: 00270
30	<p>Type 3 – Check for the suffix code of the Prior Grant.</p> <p>Get Latest Prior Grant.</p> <p>If (first two characters of the Suffix Code entered are equal to the first two characters of the Prior Grant's Suffix Code)</p> <p>AND</p> <p>(</p> <p>(4th character of the Suffix Code entered is 1 AND Prior Grant's Suffix Code only has 2 characters)</p> <p>OR</p> <p>(4th character of the Suffix Code entered is equals to [4th character of the Prior Grant's Suffix Code + 1] (make sure that 3rd and 4th characters of the Prior grant's Suffix Code are not blanks))</p> <p>)</p> <p>Then validation passed. Otherwise, display warning message</p>	Warning: 10228
31	Type 4 and Prior Grant's Support Year is not equals to entered Support Year – 1	Warning: 10226

32	Type 9 and (Serial Number is blank OR Support Year is blank).	Error: 30009
33	Type 9 and Serial Number is not blanks and Support year is not blank and Suffix Code is blank – Get Prior Grants with blank suffix codes. If Support Year equals to Prior Grant's support year then error	Error: 30007
34	Type 9 and Serial Number is not blanks and Support year is not blank and Suffix Code is blank – Get Prior Grants with blank suffix codes. If Support Year is more than [Prior Grant's support year + Prior Grant's out years + 1] then warning	Warning: 10225
35	Type 9 and Serial Number is not blank and Support year is not blank and Suffix code is not blank Check Prior Grant Algorithm	If Previous Grant Check Algorithm returned E Error: 00105 If Previous Grant Check Algorithm returned N Error: 00267 If Previous Grant Check Algorithm returned Y Passed validation – no errors.
36	Type 9 and Serial Number is not blank and Support Year is not blank and Suffix Code is not blank Check that within the list of Prior Grants (see Get Prior Grant Algorithm) at least one is awarded (status of the application is awarded). If not, then warning.	Warning: 10231
37	If IC is changing and Serial blank and Type 2 then Type 9 will be created with the same Support year.	Warning: ???
38	Type 8 and Serial Number is blank and (Support Year or Suffix Code are not blank)	Error: 30004
39	(Type 8 and Suffix is not blank) and (Activity or IC or Serial or Support Year are not entered)	Error: 30009
40	Type 8 and Suffix is not blank and all other items within the grant number are unchanged – validate the Suffix Code correctness Check Prior Grant Algorithm	If Previous Grant Check Algorithm returned E Error: 00105 If Previous Grant Check Algorithm returned N Error: 00267 If Previous Grant Check Algorithm returned Y Passed validation – no errors.
41	<i>This is the same as for Type 1, 2, or 9 – repeating</i>	Warning: 10223

	<p><i>because not sure if Type 8 requires validation in general.</i></p> <p>Type 8 and Suffix is not blank and all other items within the grant number are unchanged – validate the Suffix Code correctness</p> <p>Check Prior Grant Suffix Code</p> <p>If 2nd character of the Suffix Code NOT equals to 2nd character of the Previous Grants' Suffix Code + 1] then warning.</p> <p><i>Note: There is no code that checks that if prior grant's Suffix Code is blank, then 2nd character of the new suffix code must be 1.</i></p>	
42	<p>If changing IC and meeting is not within CSR and meeting is not within the new designated IC, then display a warning message</p>	<p>Warning: The IC and Meeting designations do not match. Do you want to continue?</p>

1.1.3.3 Algorithms for Grant Number Validation Rules

Previous Grant Check

Previous Grant Exists algorithm is invoked when creating an amendment grant. It checks for the following conditions based on the newly typed grant Number (with Suffix Code). It executes the following steps:

1. See Get Prior Grant Algorithm.

Note: If New Grant Type code is 2, then Activity Code of Prior Grant must start with same letter as New Grant, but the last two numbers of the Previous Grant Activity Code must equal to [New Grant's last two numbers of the Activity Code – 1]. *(This is a very questionable rule)*
2. If Activity code of the Previous Grant is equal to Activity Code of New Grant then ERROR CODE = Y.
3. If New Grant Type Code is 2 AND (Previous Grant Activity code is blank and Type NOT 2 or 3) then ERROR CODE = E.
4. If Previous Grant Activity Code equals to the New Grant Activity code then ERROR CODE = Y.
5. If Previous Grant Activity Code not equals to the New Grant Activity Code then
 - a) If Prior Grant Activity Code starts with F and New Grant Activity code does not start with F or
 - b) First character of the Activity Code for Prior and New Grant is the same

Then ERROR CODE = Y.
6. If Prior and New grant Activity codes start with U, P, or R then
 - a) If Prior Grant and New Grant Activity Code is within R41, R42, R43, R44, U43, or U44 then ERROR CODE = Y.
 - b) If Prior Grant Activity Code is R42 and New Grant Activity Code is R42 OR Prior Grant Activity Code is R44 and New Grant Activity Code is R44 OR

Prior Grant Activity Code is U44 and New Grant Activity Code is u44
Then ERROR CODE = Y.

- c) If Prior Grant Activity Code is R41 and New Grant Activity Code is (R41 or R42)
OR
Prior Grant Activity Code is R43 and New Grant Activity Code is (R43 or R44)
OR
Prior Grant Activity Code is U43 and New Grant Activity Code is (U43 or U44)
Then ERROR CODE = Y.

7. If there is not prior grant of any kind, then ERROR CODE = E.

Get Prior Grant

Based on the new grant entry fields get the latest non-subproject and non-deleted grant from the family of grants. The Activity codes that start with R, U, or P are treated the same between New Grant entered and Prior Grant for the search purpose. Match the IC and serial number of the New Grant with all prior records and sort by support year and suffix code descending.

1.1.4 Council Date Validation

Below table lists the conditions and errors that shall result from validating the Council Date.

#	Condition	Error Message
1	Council Date is Blank	Council Date must be entered
	Council Date not in YYYYMM format	The Council Date is invalid.
2	YYYY literal of the Council Date is not between 1900 and 2200	The Council Date is invalid. Year is out of allowable range.
3	The MM literal of the Council Date is not '01', '05', '08', or '10'	The Month of the Council Date is invalid. Valid Months are 01, 05, 08, and 10.
4	Council Date is greater than 2 years from today's date.	Council round entered cannot be later than 2 years from today's date.
5	Council Date is in the past	You cannot enter past Council Date.

1.1.5 Dual Council Date Validation

1. Same as Council Date, except error messages must refer to the Dual Council Date field.
2. Also, Dual Council Date can be blank (unlike Council Date)

1.1.6 Dual IC Validation

The Dual IC validation does not apply, since the values in the Dual IC fields will be populated from the List of Values. The list of values of the available Dual ICs must consist of all ICs where Used BY DRR code is [Yes] and it must not show RG.

#	Condition	Error Message
1	If Admin IC of the grant is not empty, then the Dual IC values entered must not contain the Admin IC value.	You cannot have same Admin IC and Dual IC values.